

Amendments to the Claims:

1. (canceled)
2. (previously presented) A crystal formed by insulin-like growth factor-1 (IGF-1) of SEQ ID NO: 1 that diffracts x-ray radiation to produce a diffraction pattern representing the three-dimensional structure of the IGF-1, and has approximately the following cell constants  $a=31.831 \text{ \AA}$ ,  $b=71.055 \text{ \AA}$ ,  $c=65.995 \text{ \AA}$ , and a space group of  $C222_1$ , and  $\alpha=\beta=\gamma$ .
3. (previously presented) The crystal of claim 2 wherein the IGF-1 contains an A-, B-, C-, and D-region and forms a dimer in the crystal and wherein the crystal comprises a receptor binding site at the dimer interface.
4. (previously presented) A composition comprising the crystal of claim 2 and a carrier.
5. (original) The composition of claim 4 wherein the IGF-1 is biologically active when resolubilized.
- 6-8. (canceled)
9. (currently amended) A method of crystallizing insulin-like growth factor-1 (IGF-1) of SEQ ID NO: 1 comprising the steps of:
  - (a) mixing (1) an aqueous solution comprising said IGF-1, sodium chloride and sodium acetate, obtained by dilution of an IGF-1 solution in a mixture of about 0.15 M sodium chloride and about 20 mM sodium acetate (pH 4.5), in up to a final IGF-1 concentration of about 1 to 50 5 to 15 mg/ml, with (2) a reservoir solution comprising a precipitant selected from the group consisting of about 24% polyethylene glycol 3350 buffered to about pH 6.5 with about 0.1 M sodium cacodylate and about 14 mM N, N-bis(3-D-gluconamidopropyl)-deoxycholamine, as a detergent, in a ratio of about 4:5 sodium citrate, ammonium sulfate, sodium cacodylate, and a mixture thereof, to form a mixed volume; and
  - (b) allowing said mixed volume to equilibrate over said reservoir solution until small crystals with a plate-like morphology appear in about 4 to 5 days;
  - (c) adding methyl pentanediol to a final concentration of about 20%; and
  - (d) crystallizing recrystallizing the mixed volume mixture to yield IGF-1 crystals that diffract x-ray radiation to produce a diffraction pattern representing the three-

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dimensional structure of the IGF-1, and have approximately the following cell constants  $a=31.831 \text{ \AA}$ ,  $b=71.055 \text{ \AA}$ ,  $c=65.995 \text{ \AA}$ , and a space group of  $C222_1$ , and  $\alpha=\beta=\gamma$ .

10. (original) The method of claim 9 wherein the IGF-1 is obtained from a prokaryotic cell.

11-20. (canceled)

21. (currently amended) The method of claim 9 wherein the equilibration in step (b) is

carried out by vapor diffusion crystallization, batch crystallization, liquid bridge

crystallization, or dialysis crystallization.

22. (currently amended) The method of claim 9 wherein the equilibration in step (b) is

carried out by vapor diffusion crystallization.

23.-26. (canceled)

27. (currently amended) Crystalline insulin-like growth factor-1 (IGF-1) produced by the method of claim 26.

28-34. (canceled)

35. (previously presented) A co-crystalline complex of crystals of insulin-like growth factor-1 (IGF-1) of SEQ ID NO: 1 having approximately the following cell constants  $a=31.831 \text{ \AA}$ ,  $b=71.055 \text{ \AA}$ ,  $c=65.995 \text{ \AA}$ , and a space group of  $C222_1$ , and  $\alpha=\beta=\gamma$ , and N, N-bis(3-D-gluconamidopropyl)-deoxycholamine.

36. (previously presented) A method for determining a three-dimensional structure of IGF-1 of SEQ ID NO: 1 comprising:

(a) crystallizing the IGF-1;

(b) irradiating the crystalline IGF-1 to obtain a diffraction pattern characteristic of the crystalline IGF-1, wherein the crystalline IGF-1 has approximately the following cell

constants  $a=31.831 \text{ \AA}$ ,  $b=71.055 \text{ \AA}$ ,  $c=65.995 \text{ \AA}$ , and a space group of  $C222_1$ , and  $\alpha=\beta=\gamma$ ;

and

(c) transforming the diffraction pattern into the three-dimensional structure of the IGF-1.

37-48. (canceled)

49. (currently amended) A heavy-atom derivative of the crystalline IGF-1 of claim 2.

50. (canceled)